Kristen E. Govoni

Curriculum Vitae

University of Connecticut
1376 Storrs Road
Storrs, CT 06269-4000

(860) 486-2919
kristen.govoni@uconn.edu

Current Position:
Associate Dean of Academic Program, College of Agriculture, Health and Natural Resources
Director of Ratcliffe Hicks School of Agriculture

Personal Information: Married; two sons (14 and 17 years old)

Education

2003 **Ph.D., University of Connecticut, Animal Science**
Dissertation title: *The ontogeny of the somatotropic axis in male and female Hereford calves from birth to one year of age and its response to exogenous somatotropin*
Advisor: Steven A. Zinn, Ph.D.

2002 **M.S., University of Connecticut, Animal Science**
Concentration: *The ontogeny of the somatotropic axis and insulin-like growth factor binding proteins in beef calves*
Advisor: Steven A. Zinn, Ph.D.

1998 **B.S., University of Connecticut, Animal Science**

Research and Training Experience

August 2023 – present ***Professor,*** Department of Animal Science, University of Connecticut, Storrs
August 2015 – 2023 ***Associate Professor,*** Department of Animal Science, University of Connecticut, Storrs

August 2008 – 2015 ***Assistant Professor,*** Department of Animal Science, University of Connecticut, Storrs

September 2003 – 2008 ***Postdoctoral Research Associate,*** Musculoskeletal Disease Center; Molecular Genetics Division, Jerry L Pettis VA Medical Center, Loma Linda, CA. *Mentor: Subburaman Mohan, Ph.D.*

June 1998 – 2002 ***Research Assistant II,*** Department of Animal Science University of Connecticut

May 1997 – 1998 **Undergraduate Research Assistant,** Department of Animal Science, University of Connecticut

Academic Awards and Honors

2023 **USDA Excellence in College and University Teaching in the Food and Agricultural Sciences**, Northeast Region.

2021 **ASAS/ADSA Northeast Distinguished Service Award** - Recognition of outstanding contributions to the broad field of Animal/Dairy Science based upon total achievement in all areas related to animal production and/or their products including the following: teaching, research, extension, responsibilities with national and regional ADSA/ASAS activities (emphasis will be placed on activities within the region), cooperative efforts with livestock and dairy organizations, and demonstrated effectiveness of the candidate's efforts.

2020 **The Presidential M1 Mentorship Award Program** - The M1 Mentorship Award Program aims to establish a cadre of accomplished UConn faculty who will deliver mentorship to racial and ethnic underrepresented individuals along the biomedical science pipeline. Through my award I will mentor current Young Innovative Investigator Program (YIIP) scholars, recruit new mentees, develop networking events and database, and develop training workshops to enhance writing and presentation skills for mentees at various stages of their careers in biomedical science.

2019 **Petit Family Foundation Women in Science Leadership Award, Connecticut Science Center** - This award recognizes a woman working in STEM who is a leader in her field, and who makes a significant effort to support other women and encourage girls' interests in STEM. The honoree is selected by the Connecticut Science Center's Women in Science steering committee. This is a highly competitive award with nominees coming from academic and industry across the state of CT.

2014 **Donald M. Kinsman Award for Excellence in CANR/RHSA Undergraduate Teaching by Junior Faculty** - The Kinsman Award recognizes outstanding classroom teaching by CAHNR/RHSA faculty members.

2013 **ASAS/ADSA Northeast Young Scientist Award for Research** - Recognition of outstanding contributions to the broad field of Animal/Dairy Science by a young scientist as a researcher.

2006 **Endocrine Society Travel Grant** - Provided travel funds to present an oral presentation at the Endocrinology meeting

2005 **ASBMR Young Investigator Award** - Provided travel funds to present data at the ASBMR Annual Meeting

2005 **Women in Endocrinology, Abstract Award** - Provided travel funds to present data at the Endocrinology Annual Meeting

2001 **ASAS/ADSA Northeast Graduate Student Paper Competition**, Second Place

Professional Memberships

2013 – 2015	Member, American Dairy Science Association
2008 – 2022	Member, UConn, Women In Math, Science, and Engineering (WIMSE) Faculty Group
2003 – 2011	Member, Endocrine Society
2003 – 2011	Member, American Society of Bone Mineral Research
2003 – 2009	Member, Women in Endocrinology
2000 – 2004	Member, Phi Kappa Phi Honor Society
1998 – Present	Member, American Society of Animal Science (ASAS)

Scholarship

Book Chapter

1. Smith BI*****, **Govoni KE#**. (2022) Use of Agriculturally Important Animals as Models in Biomedical Research. Adv Exp Med Biol. 2022; 1354:315-333. doi: 10.1007/978-3-030-85686-1_16.
   Contribution: invited for book chapter review, wrote and edited the review, and mentored graduate student in writing a review.

Journal Manuscripts (54 total)

**** indicates graduate student from my laboratory***
***** indicates undergraduate student from my laboratory***
 # corresponding author

1. Smith BI*, Vásquez-Hidalgo MA, Li X, Vonnahme KA, Grazul-Bilska AT, Swanson KC, Moore TE, Reed SA, **Govoni KE#**. 2024. The Effects of Maternal Nutrient Restriction during Mid to Late Gestation with Realimentation on Fetal Metabolic Profiles in the Liver, Skeletal Muscle, and Blood in Sheep. Metabolites. Aug 23;14(9):465. doi: 10.3390/metabo14090465. PMID: 39330472; PMCID: PMC11434268.

2. Tillquist NM*, Reed SA, Reiter AS, Kawaida MY, Lee EC, Zinn SA, **Govoni KE#**. 2024. Effects of poor maternal diet during gestation are detected in F2 offspring. Transl Anim Sci. doi: 10.1093/tas/txae055. PMID: 38665215; PMCID: PMC11044704.

3. Trotta RJ, Vasquez-Hidalgo MA, Smith BI*, Reed SA, **Govoni KE**, Vonnahme KA, Swanson KC. 2023. Timing of maternal nutrient restriction during mid- to late-gestation influences net umbilical uptake of glucose and amino acids in adolescent sheep. J Anim Sci. 2023 doi: 10.1093/jas/skad383. PMID: 37982730; PMCID: PMC10684045.

4. Zhu L, Tillquist N*, Scatolin G, Gately R, Kawaida M, Reiter A, Reed S, Zinn S, **Govoni K**, Jiang Z. 2023. Maternal restricted- and over- feeding during gestation perturb offspring sperm epigenome in sheep. Reproduction. doi: 10.1530/REP-23-0074. PMID: 37647207; PMCID: PMC10962644.

5. Tillquist NM*, Reed SA, Kawaida MY, Reiter AS, Smith BI*, Jang H, Lee JY, Lee EC, Zinn SA, **Govoni KE#**. Restricted- and over-feeding during gestation decreases growth of offspring throughout maturity. Transl Anim Sci. 2023 May 31;7(1):txad061. doi: 10.1093/tas/txad061. PMID: 37334247; PMCID: PMC10276548.

6. Felix, TL, Emenheiser, JC, **Govoni, KE**, Zinn, SA, and Reed, SA# (2023) Survey of the use of beef semen in dairy herds in Pennsylvania and nearby states. Transl Anim Sci. 2023 Apr 8;7(1):txad038. doi: 10.1093/tas/txad038. PMID: 37128553; PMCID: PMC10148458.

7. Reed, SA, Ashley, R, Silver, G, Spaline, C, Jones, AK, Pillai, SM*, Hoffman, ML*, Zinn, SA, and **Govoni KE#**. 2022. Special Feature: Maternal nutrient restriction and over-feeding during gestation alter expression of key factors involved in placental development and vascularization. J Anim Sci. 2022 Aug 1;100(8):skac061. doi: 10.1093/jas/skac061.
Contribution: project conceptual development, mentored in vivo study, sample collection, and reviewed and edited manuscript

8. Reed, SA#, Balsbaugh, J, Li, X, Moore, TE, Jones, AK, Pillai, SM*, Hoffman, ML, KK, **Govoni, KE**, Zinn, SA. 2022. Poor maternal diet during gestation alters offspring muscle proteome in sheep. J Anim Sci. 2022 Jun 1;100(6):skac155. doi: 10.1093/jas/skac155. PMID: 35648126.
Contribution: project conceptual development, mentored in vivo study, sample collection, and reviewed and edited manuscript

9. Liu, Y, Ding, Q, Halderson, SJ, Arriola Apelo, SI, Jones, AK, Pillai, SM*, Hoffman, ML*, Reed, SA, **Govoni, KE**, Zinn, SA, and Guo, W#. (2022) Maternal overnutrition during gestation in sheep alters autophagy associated pathways in offspring heart. Front. In Genetics. Front. Genet., 31 January. doi.org/10.3389/fgene.2021.742704.
Contribution: project conceptual development, mentored in vivo study, sample collection, and reviewed and edited manuscript

10. Smith BI*, Liefeld A, M MA, Vonnahme KA, Grazul-Bilska AT, Swanson KC, Mishra N, Reed SA, Zinn SA, **Govoni KE#** (2021) Mid- to late- gestational maternal nutrient restriction followed by realimentation alters development and lipid composition of liver and skeletal muscles in ovine fetuses. J Anim Sci. skab299. doi: 10.1093/jas/skab299.
Contribution: project conceptual development, developed multi-institution collaboration, secured funding, mentored student, data collection, data analysis, and manuscript preparation

11. Peterson M*#, Gauvin M*, Pillai S*, Jones A, McFadden K*, Cameron K, Reed S, Zinn S, **Govoni K**. (2021) Maternal Under- and Over-Nutrition during Gestation Causes Islet Hypertrophy and Sex-Specific Changes to Pancreas DNA Methylation in Fetal Sheep. Animals (Basel):11(9):2531. doi: 10.3390/ani11092531.
Contribution: project conceptual development, secured funding for postdoctoral fellow, mentored fellow, data collection, data analysis, and manuscript preparation. The lead and corresponding author (Maria Hoffman/Peterson was a Ph.D. student and postdoctoral fellow in my laboratory).

12. Soranno LM, Jones AK, Pillai SM*****, Hoffman ML*****, Zinn SA, **Govoni KE**, Reed SA**#** (2021) Effects of poor maternal nutrition during gestation on ewe and offspring plasma concentrations of leptin and ghrelin. Domest Anim Endocrinol:78:106682. doi: 10.1016/j.domaniend.2021.106682.
Contribution: project conceptual development, mentored in vivo study, sample collection, and reviewed and edited manuscript

13. Kelly, MR, Halpern, A*, Reed, SA, Zinn, SA, and **Govoni, KE**# (2021) Understanding gestational and feed management practices of New England sheep producers. Transl Anim Sci. 2021 Jan 3;5(1):txaa234. doi: 10.1093/tas/txaa234
Contribution: project conceptual development, mentored student and survey development and dissemination, data collection, data analysis, and manuscript preparation

14. Gauvin, M*, Pillai, SM*, Reed, SA, Stevens, JR, Hoffman, ML*, Jones, AK, Zinn, SA, and **Govoni, KE**# (2020). Poor maternal nutrition during gestation in sheep alters prenatal muscle growth and development in offspring. J. Anim. Sci. 98: doi: 10.1093/jas/skz388.
Contribution: project conceptual development, mentored in vivo study, sample analysis, data collection, data analysis, and manuscript preparation

15. **Govoni, KE**#, Reed, SA, and Zinn, SA. (2019). Invited Symposium Review: Poor maternal nutrition during gestation: Effects on offspring whole body and tissue-specific metabolism in livestock species. J Anim. Sci. 97:3142-3152. https://doi.org/10.1093/jas/skz157.
Contribution: presented invited talk at international meeting, drafted manuscript

16. Martin, D, Jones, A, Pillai, S*, Hoffman, M*, McFadden, K**, Zinn, S, **Govoni, K**, and Reed, S# (2019). Maternal Restricted- and Over-Feeding During Gestation Result in Distinct Lipid and Amino Acid Metabolite Profiles in the Longissimus Muscle of the Offspring. Front. Physiol. https://doi.org/10.3389/fphys.2019.00515.
Contribution: project conceptual development, mentored in vivo study, sample collection, and reviewed and edited manuscript

17. Duan, J, Flock, K, Jue, N, Zhang, M, Jones, A, Seesi, S, Mandoiu, II, Pillai, S*, Hoffman, M*, O'Neill, RJ, Zinn, S, **Govoni, K**, Reed, SA, Jiang, H, Jiang, Z, & Tian, X# (2019). Dosage Compensation and Gene Expression of the X Chromosome in Sheep. G3: Genes, Genomes, Genetics;9(1):305-314. doi: 10.1534/g3.118.200815.
Contribution: mentored in vivo study, sample collection, and reviewed and edited manuscript

18. Duan, JE, Zhang, M, Flock, K, Seesi, SA, Mandoiu, I, Jones, A, Johnson, E, Pillai, S*, Hoffman, M*, McFadden, K**, Jiang, H, Reed, S, **Govoni, K**, Zinn, S, Jiang, Z, Tian, XC# (2018). Effects of maternal nutrition on the expression of genomic imprinted genes in ovine fetuses. Epigenetics. 13(8):793-807. doi: 10.1080/15592294.2018.
Contribution: mentored in vivo study, sample collection, and reviewed and edited manuscript

19. Jones, AK, Gately, RE, Kellogg, TD, Zinn, SA, **Govoni, KE**, and Reed, SA# (2018). Evaluation of the Nova Vet Meter for sheep-side monitoring of β-hydroxybutyric acid (BHBA) and description of ewe BHBA during late gestation in three flocks from the Northeastern U.S. Res Vet Sci. May 7;118:491-497. doi: 10.1016/j.rvsc.2018.05.002.
Contribution: contributed to project conceptual development and design, mentored data collection and analysis, and reviewed and edited manuscript

20. Jones, AK, Hoffman, ML*, Pillai, SM*, McFadden**, KK, **Govoni, KE**, Zinn, SA, and Reed, SA# (2017). Gestational restricted- and over-feeding promote maternal and offspring inflammatory responses that are distinct and dependent on diet in sheep. Biol. Reprod. Dec 20. doi: 10.1093/biolre/iox174.
Contribution: contributed to project conceptual development, mentored in vivo study, sample collection and analysis, data collection and analysis, and reviewed and edited manuscript

21. Zinn, SA#, **Govoni, KE**, and Vonnahme, KA. (2017). Developmental Programming: What Mom Eats Matters. Animal Frontiers 7:3-4.
Contribution: Co-Editor of Issue, identified and invited guest authors, reviewed manuscripts, and contributed to Editorial Overview

22. Reed, SA **and Govoni, KE**#. 2017. How Mom's diet affects offspring growth and health through modified stem cell function. Animal Frontiers 7:25-31 https://doi.org/10.2527/af.2017-0125.
Contribution: invited review article for special issue, drafted manuscript

23. Hoffman, ML*, Reed, SA, Pillai*, SM, Jones, AK, McFadden**, KK, Zinn, SA, and **Govoni, KE**# (2017). PHYSIOLOGY AND ENDOCRINOLOGY SYMPOSIUM: The effects of poor maternal nutrition during gestation on offspring postnatal growth and metabolism. J. Anim. Sci. 95:2222-2232. doi: 10.2527/jas.2016.1229.
Contribution: presented invited talk at international meeting, mentored student writing and drafted manuscript

24. Jones, AK, Gately, RE, McFadden, KK**, Zinn, SA, **Govoni, KE**, and Reed, SA# (2017). Ultrasound during mid-gestation: Agreement with physical fetal and placental measurements and use in predicting gestational age in sheep. Reprod. Domest. Anim. 52:649-654. doi: 10.1111/rda.12961.
Contribution: contributed to project conceptual development and design, mentored data collection and analysis, and reviewed and edited manuscript

25. Pillai, SM*, Jones, AK, SM, Hoffman, ML*, McFadden, KK**, Reed, SA, Zinn, SA, and **Govoni, KE**# (2017). Fetal and organ development at gestational days 45, 90, 135 and at birth of lambs exposed to under- or over-nutrition during gestation. Transl. Anim. Sci. doi:10.2527/jas2016.0002.
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and manuscript preparation

26. Pillai, SM*, Sereda, NH**, Hoffman, ML*, Valley, EV**, Crenshaw, TD, Park, YK, Lee, JY, Zinn, SA, and **Govoni, KE**# (2016). Effects of poor maternal nutrition during gestation on bone development and mesenchymal stem cell activity in offspring. PLos One 11: doi: 10.1371/journal.pone.0168382.
Contribution: project conceptual development and design, mentored in vivo and in vitro study, sample and data collection, data analysis, and manuscript preparation

27. Hoffman, ML*, Peck, KP, Wegrzyn, JL, Reed, SA, Zinn, SA, and **Govoni, KE**# (2016). Poor maternal nutrition during gestation alters the expression of genes involved in muscle development and metabolism in lambs. J. Anim. Sci. 94:3093-3099.
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and manuscript preparation

28. Hoffman, ML*, Peck, KN, Forella, ME, Fox, AR, **Govoni, KE**, and Zinn, SA# (2016). The effects of poor maternal nutrition during gestation on postnatal growth and development of lambs. J. Anim. Sci. 94:789-799. doi.org/10.2527/jas.2015-9933
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and manuscript preparation

29. Raja, JS, Hoffman, ML*, **Govoni, KE**, Zinn, SA, and Reed, SA# (2016). Restricted maternal nutrition alters myogenic regulatory factor expression in satellite cells of ovine offspring. Animal 10:1200-1203. doi: 10.1017/S1751731116000070.
Contribution: contributed to project conceptual development and design, mentored in vivo study, sample collection, and reviewed and edited manuscript

30. Jones, AK, Gately, RE, McFadden**, KK, Zinn, SA, **Govoni, KE**, and Reed, SA# (2016). Transabdominal ultrasound for detection of pregnancy, fetal and placental landmarks, and fetal age before day 45 of gestation in the sheep. Theriogenology 85:939-945. doi: 10.1016/j.theriogenology.2015.11.002.
Contribution: contributed to project conceptual development and design, mentored in vivo study, sample collection, and reviewed and edited manuscript

31. **Govoni, KE**# (2015). Use of mesenchymal stem cells in bone repair. J Anim Sci. Mar;93(3):871-878. doi: 10.2527/jas.2014-8516.
Contribution: presented invited talk at international meeting, drafted manuscript

32. Harvey, BM**, Eschbach, M, Ackell*, E, Kotha, S, Darre, M, Adamson, D, Ramanathan, R, Mancini, R, and **Govoni, KE**# (2015). Effect of daily lithium chloride administration on bone quality and strength in growing broiler chickens. Poult Sci. Feb;94(2):296-301. doi: 10.3382/ps/peu079.
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and manuscript preparation

33. Reed, SA#, Raja, JS, Hoffman, ML*, Zinn, S, and **Govoni, KE**. (2014). Poor maternal nutrition inhibits muscle development in ovine offspring. J. Anim. Sci. Biotechn. 5(1):43. doi: 10.1186/2049-1891-5-43.
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and reviewed and edited manuscript

34. Hoffman, ML*, Rokossa, MA, Zinn, S, Hoagland, T, and **Govoni, KE**# (2014). Poor maternal nutrition during gestation in sheep reduces circulating concentrations of insulin-like growth factor (IGF)-I and IGF binding protein (IGFBP)-3 in offspring. Domest. Anim. Endocrinol. 49C:39-48. doi: 10.1016/j.domaniend.2014.05.002.
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and manuscript preparation

35. Hoffman, ML*, McFadden, KK**, Hoagland, T, Kazmer, G, and **Govoni, KE**# (2014). Short communication: Expression of T-box 2 and 3 in the bovine mammary gland. J. Dairy Sci. 97:4322-8. doi: 10.3168/jds.2013-7771.
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and manuscript preparation

36. Glynn, E*, Alfredo, S-L, Zinn, S, Hoagland, T, and **Govoni, KE**# (2013). Culture conditions for equine bone marrow mesenchymal stem cells and expression of key transcription factors during their differentiation into osteoblasts. J. Anim. Sci. Biotechnol 4:40. oi: 10.1186/2049-1891-4-40.
Contribution: project conceptual development and design, mentored in vivo study, sample and data collection, data analysis, and manuscript preparation

37. Xing, W, **Govoni, KE**, Donahue, LR, Kesavan, C, Wergedal, J, Long, C, Bassett, JH, Gogakos, A, Wojcicka, A, Williams, GR, and Mohan, S# (2012). Genetic evidence that thyroid hormone is indispensable for prepubertal insulin-like growth factor-I expression and bone acquisition in mice. J. Bone. Miner. Res. 27:1067-79. doi: 10.1002/jbmr.1551.
Contribution: performed in vivo study, samples collection, data analysis and assisted with manuscript preparation

38. **Govoni, KE**# (2012). Insulin-like growth factor-I molecular pathways in osteoblasts: Potential targets for pharmacological manipulation. Curr. Mol. Pharmacol. 5:143-52.
Contribution: invited review for special issue

39. **Govoni, KE**, Goodman, D, Maclure RM, Penfold, LM, and Zinn, SA# (2011). Serum concentrations of insulin-like growth factor and insulin-like growth factor binding protein-2 and -3 in eight hoofstock species. Zoo Biol. 30:275-84. doi: 10.1002/zoo.20351.
Contribution: performed sample analysis, data analysis, and manuscript preparation

40. Linares, GR, Xing, W, **Govoni, KE**, Chen, ST, and Mohan, S.# (2009). Glutaredoxin 5 regulates osteoblast apoptosis by protecting against oxidative stress. Bone 44:795-804. Epub 2009 Jan 14. doi: 10.1016/j.bone.2009.01.003.
Contribution: mentored in vitro study, data collection, data analysis and manuscript preparation.

41. **Govoni, KE**, Linares, GR, Chen, ST, Pourteymoor, S, and Mohan, S.# (2009). T-box 3 negatively regulates osteoblast differentiation by inhibiting expression of osterix and runx2. J. Cell. Biochem. 106:482-90. doi: 10.1002/jcb.22035.
Contribution: performed in vitro experiments, data collection and analysis, and manuscript preparation

42. **Govoni, KE**, Wergedal, JE, Chadwick, RB, Srivistava, AK, and Mohan, S.# (2008). Pre-pubertal OVX increases IGF-I expression and bone accretion in C57BL/6J mice. Am. J. Physiol. Endocrinol. Metab. 295:E1172-80. doi: 10.1152/ajpendo.90507.2008.

Contribution: performed in vivo experiments, sample collection, data collection and analysis, and manuscript preparation

43. **Govoni, KE**, Donahue, LR, Marden, C, and Mohan, S.# (2008). Complex genetic regulation of bone mineral density and insulin-like growth factor-I in C57BL/6J-Chr #A/J/NaJ chromosome substitution strains. Physiol. Genomics. 35:159-64. oi: 10.1152/physiolgenomics.90203.2008.
Contribution: performed in vivo experiments, sample collection, data collection and analysis, and manuscript preparation

44. **Govoni, KE**, Wergedal, JE, Florin, L, Angel P, Baylink, DJ, and Mohan, S.# (2007). Conditional Deletion of IGF-I in Collagen Type 1α2 (Col1α2) Expressing Cells Results In Postnatal Lethality and a Dramatic Reduction in Bone Accretion. Endocrinology 148:8706-15.
Contribution: performed in vivo experiments, sample collection, data collection and analysis, and manuscript preparation

45. Velayudhan, BT, **Govoni, KE**, Hoagland, TA, and Zinn, SA.# (2007). Growth rate and concentrations of the somatotropic axis in beef cattle administered exogenous bovine somatotropin beginning at 200, 250 and 300 days of age. J. Anim. Sci. 85:2886-72.
Contribution: project conceptual development and design, and reviewed and edited manuscript

46. **Govoni, KE**, Lee, SK, Chung, YS, Behringer, RR, Wergedal, JE, Baylink, DJ, and Mohan, S.# (2007). Disruption of insulin-like growth factor (IGF)-I expression in type II-alpha I collagen expressing cells reduces bone length and width in mice. Physiol Genomics 30:354-62.
Contribution: performed in vivo experiments, sample collection, data collection and analysis, and manuscript preparation

47. **Govoni, KE**, Kramer, A, Winter, E, Amaar, YG, Baylink, DJ, and Mohan, S.# (2005). Regulation of insulin-like growth factor binding protein (IGFBP)-5, four and a half lim (FHL)-2, and a disintegrin and metalloprotease (ADAM)-9 expression in osteoblasts. Growth Horm. IGF Res. 16:49-56.
Contribution: performed in vitro experiments, sample collection, data collection and analysis, and manuscript preparation

48. **Govoni, KE**, Baylink, DJ, and Mohan, S.# (2005). The multi-functional role of insulin-like growth factor binding proteins in bone. Pediatr. Nephrol. 20:261-268.
Contribution: invited review, manuscript preparation

49. **Govoni, KE**, Hoagland, TA, and Zinn, SA.# (2004). The ontogeny of the somatotropic axis in Hereford calves from birth to one year of age and its response to administration of exogenous bovine somatotropin. J. Anim. Sci. 82:1646-1655.
Contribution: project conceptual development and design, performed in vivo experiments, sample collection, data collection and analysis, and manuscript preparation

50. **Govoni, KE**, Hoagland, TA, and Zinn, SA.# (2003). The ontogeny of the somatotropic axis in male and female Hereford calves from birth to one year of age. J. Anim. Sci. 81:2811-2817.
Contribution: project conceptual development and design, performed in vivo experiments, sample collection, data collection and analysis, and manuscript preparation

51. **Govoni, KE**, Tian, XC, Kazmer, GW, Taneja, M, Enright, B, Rivard, AL. Yang, X and Zinn, SA.# (2002). Age-related changes of the somatotropic axis in cloned Holstein calves. Biol. of Reprod. 66:1293-1298.
Contribution: sample collection, data collection and analysis, and manuscript preparation

52. Rausch, MI, Tripp, MW, **Govoni**, **KE,** Zang, W, Weber, WJ, Crooker, BA, Hoagland, TA, and Zinn, SA.# (2002). Limit feeding and somatotropin supplementation in growing beef cattle. J. Anim. Sci. 80:94-100.
Contribution: sample and data analysis, reviewed and edited manuscript

53. Phillips, AL, Faustman, C, Lynch, MP, **Govoni, KE**, Hoagland, TA, and Zinn, SA.# (2001). Effects of dietary alpha-tocopherol supplementation on color and lipid stability in pork. Meat Science 58:389-393.
Contribution: sample and data analysis, reviewed and edited manuscript

54. Freake, HC, **Govoni, KE**, Guda, K, Huang, C, and Zinn, SA.# (2001). Actions and interactions of thyroid hormones and zinc status in growing rats. J. Nutr. 131:1135-1141.
Contribution: sample and data analysis, reviewed and edited manuscript

Abstracts (100 total)

**** indicates graduate student from my laboratory***
***** indicates undergraduate student from my laboratory***
******indicates postdoc from my laboratory***
 # corresponding author

1. Nicole M Tillquist*, Mia Y Kawaida, Amanda S Reiter, Sarah A Reed, Steven A Zinn, **Kristen E Govoni**#. PSVIII-25 Investigating the Effects of Poor Maternal Nutrition on F2 Offspring Growth, Residual Feed Intake, and Glucose Tolerance, *Journal of Animal Science*, Volume 101, Issue Supplement_3, November 2023, Pages 489–490, https://doi.org/10.1093/jas/skad281.580

2. Amanda S Reiter, Mia Y Kawaida, Nicole M Tillquist*, Brandon Smith*, **Kristen E Govoni**, Steven A Zinn, Sarah A Reed. PSVI-10 Effects of Poor Maternal Nutrition During Gestation on Offspring Basal Immune Status, *Journal of Animal Science*, Volume 101, Issue Supplement_3, November 2023, Pages 410–411, https://doi.org/10.1093/jas/skad281.487

3. Amanda S Reiter, Mia Y Kawaida, Nicole M Tillquist*, Brandon Smith*, **Kristen E Govoni**, Steven A Zinn, Sarah A Reed. 446 The Effects of Maternal Diet During Gestation on Oxidative Status of Offspring, *Journal of Animal Science*, Volume 101, Issue Supplement_3, November 2023, Pages 213–214, https://doi.org/10.1093/jas/skad281.259

4. Rachel Carter, Steven A Zinn, **Kristen E Govoni**, Joe Emenheiser, Tara L Felix, Sarah A Reed. PSIII-3 Effects of Milk Replacer Composition on Beef X Dairy Calf Growth and Muscle Fiber Cross-Sectional Area, *Journal of Animal Science*, Volume 101, Issue Supplement_3, November 2023, Pages 387–388, https://doi.org/10.1093/jas/skad281.459

5. Julianna Bosco**, Nicole M Tillquist*, Mia Y Kawaida, Amanda S Reiter, Alexandra Bettencourt, Ryan J Gifford, Terry E Engle, Sarah A Reed, Steven A Zinn, **Kristen E Govoni#.** PSIV-1 Effects of Poor Maternal Nutrition During Gestation on F0 and F1 Ewe Colostrum and Milk Composition and Colostrum Igg, *Journal of Animal Science*, Volume 101, Issue Supplement_3, November 2023, Pages 420–421, https://doi.org/10.1093/jas/skad281.497

6. M. Brown**, N. Tillquist*, M. Kawaida, A. Reiter, R. O'Neill, S. Reed, S. Zinn, and **K. Govoni#**. 2024. Poor maternal diet during gestation impacts male offspring DNA methylation and mRNA expression in liver tissue. Plant and Animal Genome Meeting, San Diego, CA January 2024.

7. Zhu, L, Tillquist*****, N, Shi, J, Chen, Q, **Govoni, K**, Reed, S. Zinn, S, and Jiang, Z.# (2022). Maternal gestational nutrition perturbs small RNA code in offspring sperm in sheep. International Embryo Technology Society, January 2022.

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2. "Role of maternal nutrient restriction and betaine supplementation in offspring growth and epigenetic regulation in the liver". USDA-NIFA-AFRI. 01/2022 – 12/2025. **$650,000, PI.**

3. "2022 Aspen Perinatal Biology Symposium (Conference Grant)". USDA-NIFA-AFRI. 06/2022 – 05/2023. **$25,000, PI**.

4. "Effects of poor maternal nutrition on male offspring reproductive traits and sperm RNA code". SAES Capacity Grant. 10/2022 – 09/2024. **$40,000, PI.**

5. "The effects of maternal over-nutrition on offspring liver". UConn OVPR REP. 09/2021 – 06/2022. **$25,000, PI.**

6. "Nutritional management strategies for improving growth and carcass composition of beef x dairy crossbred calves". Northeast SARE. 01/2021 – 03/2024. **$200,000, Co-PI.**
   Contribution: Secured funds (see NERA planning grant below) to develop research team and project conceptutal design, grant application, mentor graduate students, data collection, and data analysis.

7. "Effect of maternal nutrient restriction on offspring DNA methylation in the liver". SAES Capacity Grant. 10/2020 – 09/2022. **$40,000, PI**.

8. "QuantStudio 6 Pro Real-time System". UConn College of Agriculture, Health, and Natural Resources. 06/2020 – 12/2020. **$38,400, PI.**

9. "Poor maternal nutrition across generations: mechanisms and postnatal intervention". USDA-NIFA-AFRI. 08/2019 – 07/2024. **$499,990, Co-PI.**
   Contribution: Contributed to project conceptutal design, grant application, generation of preliminary data based on previous fetal prgramming studies partially funded and completed by my laboratory. Primary mentor for 1 of 2 graduate students working on this grant. Equal contribution with PI, Sarah Reed on in vivo study implementation. Dr. Reed's lab will complete oxidative stress and inflammation studies. My lab will complete feed efficience and epigenetic regulation studies.

10. "The GrowSafe System: A Critical Tool for Analyzing Environmental Effects on Residual Feed Efficiency in Sheep". USDA-NIFA-AFRI. 04/2020 – 03/2021. **$38,135, Co-PI**.
    Contribution: Contributed to project conceptutal design, grant application, generation of preliminary data based on previous fetal prgramming studies partially funded and completed by my laboratory. This equipment will be used for current projects and future studies to evaluate impact of fetal programming on offspring growth efficiency.

11. "Feeding and management of crossbred steers and the economic benefit". Northeastern Regional Association of State Agricultural Experiment Station Directors (NERA). 09/2019 – 08/2020. **$7,000, PI.**
    Contribution: Developed the proposal to support collaboration on a pilot study and partial support of travel of experts to Northeast ADSA/ASAS meeting in PA.

12. "The Effects of Nutrient Restriction and Re-alimentation On Offspring Liver And Muscle Growth And Metabolism". USDA-NIFA-AFRI. 05/2017 – 04/2020. **$489,826, PI.**
    This project is in collaboration with colleagues at North Dakota State University and UConn.

13. "The effects of poor maternal nutrition on pancreatic development of offspring". USDA-NIFA-AFRI. 12/2014 – 08/2017. **$133,689, PI-Mentor.**
    This is a USDA Fellowship grant to fund salary and research for Maria Hoffman, a former Ph.D. candidate in my laboratory.

14. "Effects of poor maternal nutrition on muscle progenitor cell function and metabolism". USDA-AFRI. 12/2016 – 12/2017. **$150,000. Co-PI**
    Contribution: Led and conducted in vivo study that provided samples for this proposal. Assisted with mentoring student, sample collection and analysis and manuscript review.

15. "Publication in BMC Genomics: Poor maternal nutrition during gestation alters the expression of genes involved in muscle development and metabolism in lambs". UConn OVPR Scholarship Facilitation Fund 02/2016 – 12/2016. **$1,825. PI**

16. "Effects of intrauterine growth retardation (IUGR) on fetal development in sheep". *USDA-NIFA-AFRI.*
    01/2014 – 12/2016. **$150,000. Co-PI**
    Contribution: Wrote the original large proposal that was revised to a seed grant after receving reviewer comments. At the time, I had another seed grant, so worked with PI (Steve Zinn) to submit. Generated preliminary data and drafted proposal, led and conducted in vivo study, mentored graduate and undergraduate students, collected samples, analyzed samples and wrote manuscripts.

17. "Characterization of novel pathways mediating plant-derived molecule inhibition of *Staphylococcus aureus* infection of bovine mammary cell". *USDA-NIFA-AFRI.*
    11/2011 to 12/2014. **$149,288. PI**

18. "Applied Biosystems 7900HT Fast Real Time PCR System and Sorvall Legend RT Plus Centrifuge". UCONN Intermediate Equipment Competition. December 2009 to June 2011. **$99,942. PI**

19. "The Illumina MiSeq System: A critical took for evaluating host-pathogen interactions and identifying genomic markers for livestock disease control" *USDA-NIFA-NIFA*. Equipment Grant.
    09/2014 – 08/2016. **$47,612. PI**

20. "Use of a cell bioenergetics analyser to determine the effect of diet and bioactive food components on energy metabolism". *USDA-AFRI Equipment Grant*
    12/2013 – 11/2015. **$50,000. Co-PI**

21. "Evaluation of the antigenicity of novel DNA-based foot and mouth disease virus vaccines in swine". *Inovio Pharmaceuticals Inc.*
    02/15/2013 to 09/01/2013. **$43,238. PI**

22. "Effects of intrauterine growth retardation (IUGR) on fetal and postnatal development in sheep". University of Connecticut Research Foundation Large Faculty Grant. 2011. **$22,000. PI**

23. "Role of T-box (Tbx2) in regulating osteoblast function", University of Connecticut Research Foundation Large Faculty Grant. 2009. **$20,000. PI**

24. Corning New Lab Start-Up Grant, 2008, **$2,000**. **PI**

Hatch/Multistate Projects

1. "W4112: Reproductive Performance in Domestic Ruminants". *Storrs Agricultural Experiment Station Multistate Project.* October 2021 – Present. **PI**

2. "W3112: Reproductive Performance in Domestic Ruminants". *Storrs Agricultural Experiment Station Multistate Project.* October 2016 – September 2021. **PI**

3. "W2112: Reproductive Performance in Domestic Ruminants". *Storrs Agricultural Experiment Station Multistate Project.* October 2012 – September 2016. **CO-PI**

4. "Novel methods to improve bone formation and bone quality in livestock: Transcription factor regulation of osteoblast function", USDA – Storrs Agricultural Experiment Station Hatch Project, October 2009 – October 2012. **PI**

Seminars and Invited Presentations

1. "Effects of Poor Maternal Nutrition on Pre- and Post-natal Growth and Metabolism". *Cornell Nutrition Conference, Syracuse, NY, October 2022.*

2. "The role of maternal nutrition in developmental programming using a sheep model".

3. "The role of maternal diet in offspring metabolism". *Department of Pathobiology and Veterinary Sciences, University of Connecticut, Fall 2022.*

4. "Restricted maternal nutrition: Impacts on fetal development and metabolism in sheep". *Trienneial Growth Symposium, American Society of Animal Science and Canadian Society of Animal Science Annual Meeting, Oklahoma City, OK, June 2022.*

5. "The role of maternal nutrition in developmental programming using a sheep model".
Randal Lecture Series, Southern Section American Society of Animal Science, Fort Worth, TX, January 2022.

6. "Effects of Dam Nutrition on Offspring Metabolism".
American Society of Animal Science and Canadian Society of Animal Science Annual Meeting, Louisville, KY, July 2021.

7. "Effects of maternal nutrition during gestation on offspring metabolism using a sheep model".
Department of Animal Science, North Dakota State University, October 6, 2020

8. "Effects of poor maternal nutrition on offspring growth and metabolism".
Department of Nutritional Sciences, February 2020.

9. "ASAS Publications Symposium: A How to Guide for Publishing – The Big Picture".
American Society of Animal Science and Canadian Society of Animal Science Annual Meeting, Austin, TX 2019.

10. "Where does my food come from?" Invited presentation and workshop.
Connecticut Science Center, Women and Girls in Science Event, November 2018.

11. "Poor maternal nutrition during gestation alters whole body and cellular metabolism in offspring". Invited oral presentation in the Cell Biology Symposium: Metabolic responses to stress: From the animal to the cell.
American Society of Animal Science and Canadian Society of Animal Science Annual Meeting, Vancouver, BC 2018.

12. "What is developmental programming and why does it matter?" Invited oral presentation.
American Society of Animal Science, Snack and Fact "Developmental Programming: What Mom Eats Matters", Washington, D.C. December 2017.

13. "The effects of maternal nutrition on offspring growth and health". Invited oral presentation.
New England Sheep Breeders Blue Ribbon Sheep Day, March 2017.

14. "The effects of poor maternal nutrition during gestation on offspring growth and stem cell function". Invited oral presentation in the Physiology Symposium.
Joint Annual Meeting of American Dairy Science Association, the American Society of Animal Science, and the Canadian Society of Animal Science, July 2016.

15. "The effects of poor maternal nutrition during gestation on offspring growth". Invited Seminar.
China Agricultural University, April 2015.

16. "Use of mesenchymal stem cells in bone repair". Invited oral presentation in Horse Species Symposium: Advances in Equine Stem Cell Biology.
Joint Annual Meeting of American Dairy Science Association (ADSA), the American Society of Animal Science (ASAS), and the Canadian Society of Animal Science (CSAS), July 2014.

17. "Research to improve animal health and production: Part 1: How the mother's diet during gestation affects offspring growth, Part 2: Mechanisms of *Staphylococcus aureus* infection of the bovine mammary gland"
STEM Research Seminar, University of Connecticut, Spring 2014.

18. "Effects of poor maternal nutrition on offspring growth, health and gene expression"
Department of Pathobiology and Veterinary Sciences, University of Connecticut, Spring 2013.

19. "Factors that influence growth and bone development".
Department of Animal Science, University of Connecticut, Fall 2012.

20. "Effects of poor maternal nutrition on bone, muscle and adipose tissue development in lambs".
Department of Animal Science, University of Wisconsin-Madison, Seminar, June 2012.

21. "The roles of T-box (Tbx)2 and 3 in regulating cell function".
Department of Nutritional Sciences, University of Connecticut, Seminar, Fall 2011.

22. Invited to present a seminar to an Advanced Biology/Research class about my path to becoming a researcher and my current research.
Glastonbury High School, Seminar, April 2011.

23. Graduate Research Forum Panelist: "Presenting yourself in person: Interviewing skills".
College of Agriculture and Natural Resources, University of Connecticut, Storrs, March 2011. Invited to serve as a panelist to give advice on interviewing for postdoctoral and junior faculty positions.

24. "Role of T-box genes in regulating osteoblast function".
Center for Regenerative Biology, University of Connecticut, Seminar, February, 2011.

25. "Role of T-box genes in regulating osteoblast function".
Department of Allied Health, University of Connecticut, Seminar, December 2009.

26. DSM Nutritional Products, Round Table Discussion, Invited participant, *Chicago, IL, September 2009.* Based on my expertise in the area of regulation of osteoblast function and bone formation, I was invited to attend a two-day round table discussion with other professionals (n = 10) in the field. Our objective was to identify methods to improve bone formation and quality in the swine industry. Following this meeting I have formed ongoing collaborations with three scientists in the field.

Teaching Experience

Instructor - University of Connecticut

Spring 2019 – 2022 **ANSC 1602/SAAS 202: Behavior and Training of Domestic Animals**
Team teach this course which focuses on behaviors of domestic livestock and companion animals with an emphasis on modifying behaviors and management practices to improve production and animal welfare. Students engage in observing animal behaviors and learn to train and animal to respond to verbal and non-verbal commands.

Fall/Spr 2015 – 2022 **UNIV 1810: First Year Experience for Women in Math Science and Engineering (WiMSE)**
This is a course for first year students at UConn living the WiMSE Learning Community. Topics focus on developing skills and knowledge to be successful students at UConn and in the STEM disciplines.

Fall/Spr 2016 – 2022 **UNIV 3280: Women in Math Science and Engineering (WiMSE) Second year course**
This returning student course focuses on service learning, mentoring, and personal and career development for upper division students in the Learning Community.

Spr 2013 – Fall 2022 **ANSC 3313/5613: Growth Biology and Metabolism in Domestic Livestock**
This is a junior/senior and graduate level course, which focuses on the embryonic and postnatal growth and development of domestic livestock with emphasis on metabolic and hormonal regulation of processes that influence growth and development.

Fall 2013 - 2022 **ANSC 3314W: Scientific Writing in Growth Biology and Metabolism in Domestic Livestock**
This is a junior/senior level course in which students investigate a topic of interest related to growth and metabolism and gain experience in the process of scientific writing.

Spring 2009 – 2018 **ANSC 3194: Animal Science Seminar**
This required course is a discussion of current employment opportunities in Animal Science. In addition, students prepare resumes, learn interview skills, and practice teamwork and oral presentation skills through group poster presentations.

Fall 2009 – Fall 2012 **ANSC 2111: Principles of Animal Nutrition**
This required course covers the classes of nutrients, digestive anatomy, digestion and metabolism, feed formulations and nutritional management of livestock and companion animal species.

Fall 2002 **INTD 1800: First Year Experience**
Course for first semester freshmen. This course is designed to introduce students to the university and provide them will necessary skills to succeed in college. In addition, it provides them with an opportunity to interact with their peers. Topics include study skills, time management, gathering information, healthy lifestyles, campus involvement and presentation skills.

Guest Lecturer - University of Connecticut

Fall 2008 – Present ANSC 1001: Introduction to Animal Science
Fall 2008 – Present PLSC 3230: Biotechnology
Spring 2002 ANSC 3313/5613: Growth Biology and Metabolism of Domestic Livestock

Teaching Assistant - University of Connecticut

Spring 2001 ANSC 5694: Presentation skills
Spring 2001 ANSC 3313/5613: Growth Biology and Metabolism of Domestic Livestock

Mentoring Experience

***Faculty Director*; UConn Women in Math, Science and Engineering (WiMSE) Learning Community,** 2015 – 2022

Lead a team of graduate students, undergraduates and staff to develop programming and course content for the learning community which provides ongoing support for female undergraduate students in STEM majors. As the Director, I mentor the freshmen, sophomore, and junior mentors and graduate assistants who, in turn, serve as mentors for the freshmen and sophomore residents. The focus of the community is to create an environment of women in STEM disciplines that supports personal and educational success while at UConn and fosters advancement of women in STEM careers. In addition, we work with other UConn faculty, staff, and industry partners to develop programs and connections between the students and potential employers. This LC provides 5 First Year Experiences courses and 2 upper-level career development and services learning courses each year. As the Director, I instructor or co-instruct all of the courses each year.

***Presidential M1 Mentor;* Faculty mentor for students (middle school through graduate school in biomedical science,** 2020 – Present

This is a competitive award program through the Connecticut Convergence Institute for Translation in Regenerative Engineering (CCI) and the Office of the Provost. Mentors will be responsible for mentoring students in the biomedical sciences program, recruiting students from under-represented groups, and developing and implementing new programs to enhance the program and provide mentorship.

Faculty Mentor in Animal Science, 2020 – present

Serve as a mentor to a junior faculty member through frequent formal and informal meetings, grant review, manuscript review, and guidance on navigating the tenure-track position at UConn.

***Leadership Legacy Mentor:* Faculty mentor for undergraduate in the program,** 2019 and 2020 cohorts.

Served as a faculty mentor for a student accepted into the program for the calendar year. This included regular one-on-one meetings, group events, and activities focused on developing the cohort as the next generation of leaders.

Postdoctoral Mentor:

Maria Hoffman, 2014-2016, *Awarded a USDA Postdoctoral fellowship, Current position:* Assistant Professor, Department of Fisheries, Animal and Veterinary Sciences, University of Rhode Island
Nicole Tillquist, 2023 – Present, *Awarded a USDA Postdoctoral fellowship*

Major Advisor:

Elizabeth Ackell, M.S., 2011, *Current position:* Scientist, Boehringer Ingelheim Pharmaceuticals
Nidhish Francis, M.S., 2011, *Current position:* Ph. D. Candidate, Australia India Institute
Sarita Neupane, M.S., 2013, *Current position:* Research Assistant II, The Jackson Laboratory
Maria Procopio/Hoffman, M.S., 2013, Ph.D., 2014, *Current position:* Assistant Professor, U of Rhode Island
Sambhu MG, M.S., 2015, Ph.D., 2016, *Current position:* Postdoctoral Fellow, Georgetown University
Mary Wynn, M.S., 2018, *Current position:* Manager of Subject Recruitment at Nelson Laboratories Bozeman, LLC
Devi Jaganathan, Ph.D., 2019, *Current position:* Postdoctoral Fellow, Nationwide Children's Hospital
Arielle Halpern, M.S., 2019, *Current position:* 4-H Extension Educator, Penn State University
McKenna Constadine, Ph.D. (left after 1 semester for personal reasons)
Alexis Trench, M.S., 2020, *Current position:* Associate Director/Career Advisor, Wellesley College
Brandon Smith, Ph.D., 2021, *Current position:* Postdoctoral Associate, Ann Arbor Pharmaceuticals
ShyAnn Williams, M.S., 2021, *Current position:* Laboratory Technician, Torigen Pharmaceuticals
Nicole Tillquist, Ph.D., 2023, *Current position:* Postdoctoral Fellow (USDA Grant), UConn
Santhi Priya, Ph.D. (current)
Nicholas Barnello, M.S., 2024

Associate Advisor:

Evan Barry, Ph.D., 2010, *Current position:* Senior Scientist, AstraZeneca Oncology iMED
Bo Dai, Ph.D., 2009, *Current position:* Postdoctoral Scholar, Stanford University
Kristen Peck, M.S., 2013, *Current position:* Research Specialist, University of Pennsylvania

Melissa Rokosa, M.S., 2013, *Current position:* Account Manager, FDM Group
Joseline Raja, M.S., 2014, *Current position:* Research Assistant 2, Oregon Health and Science University
Abhinav Upadhyay, Ph.D. 2015, *Current position:* Postdoctoral Associate
Amanda Jones, Ph.D. 2017, *Current position:* Scientist, Boehringer Ingelheim Pharmaceuticals
Dominique Martin, M.S. 2018, *Current position:* Ph.D. student, UCHC
Amanda Liefeld, M.S., 2019, *Current position:* Research Scientist
Ling Wang, Ph.D., 2019, *Current position:* Postdoctoral Fellow, UConn
Chang Huang, Ph.D. 2020,
Justine Liu, M.S. 2020,
Jacqueline Johnson, M.S., 2022
Kirsten Krause, M.S., 2022
Angela Miller, M.S., 2023
Amanda Reiter, Ph.D., 2023
Mia Kawaida, Ph.D., 2024
Rachel Carter, M.S., 2023
Gopi Yalavarthi, M.S., 2024
Cheyenne Summers, Ph.D., current

University Scholar Advisor:

Katelyn McFadden, Advisor; Fall 2013 – Spring 2015; Title: *Effects of poor maternal nutrition on liver development in lambs*. UConn IDEA Grant recipient ($4,000), this is a student initiated independent project that allows students to develop novel ideas and test their hypotheses. This project was separate from her honors thesis work.

James Gaffney, Committee Member; Fall 2010 – Spring 2012; Title*: Investigating the Potential of Plant-derived Molecules for Controlling Multi-drug Resistant Acinetobacter baumannii*

Undergraduate Honors Thesis Advisor

Amanda Lopez, Fall 2009 – Spring 2011; Title: *Characterization of differentiation of bovine mammary epithelial cells*

Zachary Cosgrove, Fall 2011 – Spring 2014; Title: *A review of diets for exotic species at Connecticut's Beardsley Zoo*

Katelyn McFadden, Fall 2011 – Spring 2015; Title: *Effects of maternal 25-hydroxycholecalciferol ($25OHD_3$) supplementation on fetal bone development in pigs*

Ellen Valley, Fall 2013 – Spring 2015; Title: *Effects of plant-derived compounds on Staphylococcus aureus infection of primary bovine mammary epithelial cells*

Nicole Sereda, Fall 2014 – Spring 2016; Title: *Effects of maternal diet on offspring mesenchymal stem cell function*
Alexandra Cabra, Fall 2015 – Spring 2018; Title: *The effects of increased maternal milk production on calf growth and health*

Lauren Engels, Fall 2016 – Spring 2019; Title: *The effects of poor maternal nutrition on fetal brain development*

Hannah Van Bergen, Fall 2017 – Spring 2020; Title: *The effects of maternal nutrient restriction and realimentation on lipid accumulation in offspring muscle tissue*

Madilyn Dupree, Fall 2020 – present: Project: *Investigating mRNA Expression of Genes Involved in Epigenetic Modification in the Liver of F1 Offspring of Poorly Fed Mothers Using a Sheep Model*

Julianna Bosco, Spring 2021 – present: Project: *The Effects of Poor Maternal Nutrition During Gestation on F1 Milk and Colostrum Quality and Immunoglobulin G Concentrations in Sheep*

Shawn Re, Spring 2021 – present: Project: *Effect of Maternal Nutrition of Offspring Intramuscular Fat of the Longissimus Dorsi Muscle*

Julianna Bosco, Spring 2021 – present: Honor Thesis Project: *The Effects of Poor Maternal Nutrition During Gestation on F1 Milk and Colostrum Quality and Immunoglobulin G Concentrations in Sheep. Secured $500 in OUR Funding and accepted abstract to ASAS Meeting July 2023.*

Michela Brown, Fall 2022 – present: Michela is an MCB major and honors student. She is in the CAPS program and recently accepted into the McNair Scholar program and MARC (T34) program. *She will be completing her thesis, McNair, and MARC research in my laboratory for the next 2 years.*

Undergraduate Research Mentor, Fall 2008 – Present

I have mentored over 50 undergraduate students in research in my laboratory and through hands-on work at the animal units. Many of these students have written grants and received competitive research funds from UConn Office of Undergraduate Research (Total to date = **$23,500**). These students are encouraged to work with the graduate students and become independent within the laboratory. To date, 11 of these students have presented abstracts at the national American Society for Animal Science meetings.

McNair Fellowship Program, UConn, Summer 2013 - Present

Presented seminars and served on numerous panels for undergraduates in the program
Hosted students in the laboratory

1. Fall 2019: Mentored Kylee Brown in laboratory and in vivo research.
2. Fall 2020: Mentored Jacqueline Cuevas Gonzalez in animal in vivo research and laboratory techniques and review of the scientific literature
3. Fall 2022: Lesley Rendon Hernandez

High School Students, 2010 – 2012

Two high school students have spent a year working in my laboratory as part of their Advanced Biology course. Katelyn McFadden (2010 – 2011) and Andrew Galinski (2011 – 2012) completed a research project and term paper while working in my laboratory. Katelyn McFadden competed in the CT State Science Fair with her research results.

Undergraduate Research Awards

1. "Role of Lithium Chloride Supplementation on Bone Growth in Broiler Chickens", *UConn Summer Undergraduate Research Foundation (SURF) Grant;* 2009. **$3,500. PI (for Beth Harvey)**

2. "Characterization of differentiation of bovine mammary epithelial cells (MEC)". *Office of Undergraduate Research (OUR)*; 2011. **$500. PI (for Amanda Lopez)**

3. "Regulation of T-box Gene Expression during Differentiation of Bone Marrow Stromal Cells (BMSC) into Mature Osteoblasts". *UConn Honors Program, Life Sciences Honors Thesis Research Grant* 2010 - 2011. **$1,000. PI (for Amanda Lopez)**

4. "Effects of Intrauterine Growth Retardation due to Poor Maternal Nutrition on Gene Expression in Muscle Tissue". *UConn Office of Undergraduate Research (OUR)*; 2012. **$300. PI (for Stephanie Tornaquindici)**

5. "Effects of Intrauterine Growth Retardation, due to Poor Maternal Nutrition, On Gene Expression and Differentiation in Osteoblasts and Adipocytes". *UConn Office of Undergraduate Research (OUR)*; 2012. **$300. PI (for Dana Kaelin)**

6. "Effects of intrauterine growth retardation, due to poor maternal nutrition, on gene expression in adipose tissue". *UConn Office of Undergraduate Research (OUR)*; 2012. **$500. PI (for Stephanie Spignasi)**

7. "Effect of maternal HyD supplementation on fetal bone development in pigs". *UConn Summer Undergraduate Research Foundation (SURF) Grant.* Summer 2012. **$4,000. PI (for Katelyn McFadden)**

8. "Effects of maternal 25-hydroxycholecalciferol (25OHD3) supplementation on fetal cartilage development in pigs". *UConn, Life Sciences Honors Thesis Award*. Spring 13. **$1,000. PI (for Katelyn McFadden)**

9. "Effects of intrauterine Growth Retardation, Due to Poor Maternal Nutrition, on Gene Expression of Adipocytes". *UConn, Office of Undergraduate Research (OUR)*. Fall 12 to Spring 13. **$500. PI (for Alison Bush)**

10. "Effects of Plant-Derived Antimicrobials on the Attachment and Invasion of *Staphylococcus aureus* Infected Mammary Epithelial Cells". *UConn, Office of Undergraduate Research (OUR)*. Fall 12 to Spring 13. **$500. PI (for Cameron Smart)**

11. "Effects of Intrauterine Growth Retardation, due to Poor Maternal Nutrition, On Gene Expression and Differentiation in Osteoblasts and Adipocytes". *UConn, Office of Undergraduate Research (OUR)*. Fall 12 to Spring 13. **$500. PI (for Dana Kaelin)**

12. "The role of plant derived molecules in *Staphylococcus aureus* invasion of the bovine mammary gland". *UConn, Office of Undergraduate Research (OUR)*. Spring 14. **$500. PI (for Ellen Valley)**

13. "Effects of poor maternal nutrition on liver development in lambs". *UConn IDEA Grant*. 2013 to 2014. **$4,000. PI (for Katelyn McFadden)**

14. **"**The Effects of Maternal Under- and Over- Feeding during Gestation to Liver and Renal Adipose Protein in Offspring" *UConn OUR Supply Grant. 2015.* **$500. PI (for Carrie LaSala)**

15. "The Effects of Poor Maternal Nutrition on Glycolytic and Oxidative Functions of Mesenchymal Stem Cells in Offspring" *UConn OUR Supply Grant. 2015.* **$500. PI (for Nicole Sereda)**

16. "Determining the Effects of Maternal Programming on Interferon Gamma Concentrations in Holstein Calves". *UConn, Office of Undergraduate Research (OUR) Supply Grant.* Spring 2017. **$400. PI (for Veronica Pleasant)**

17. "Effects of High Maternal Milk Production during Gestation on Circulating Concentrations of Insulin, Glucose, Insulin-like Growth Factor (IGF-1), and Leptin in Holstein Calves". *UConn, Office of Undergraduate Research (OUR) Supply Grant.* Spring 2017. **$400. PI (for Alexandra Cabra)**

18. "Investigating the Effect of Maternal Milk Production on Calf Growth and Blood Biochemistry". *UConn, Office of Undergraduate Research (OUR) Supply Grant.* Spring 2017. **$400. PI (for Randi Guinazzo)**

19. "Determine the effects of high maternal milk production during gestation on circulating concentrations of insulin and glucose in Holstein heifer calves". *UConn, Office of Undergraduate Research (OUR) Supply Grant.* Fall 2017. **$400. PI (for Alexandra Cabra)**

20. "Determine the effects of lactation on immunoglobulin G concentrations in female Holstein calves". *UConn, Office of Undergraduate Research (OUR) Supply Grant.* Fall 2017. **$400. PI (for Veronica Pleasant)**

21. "Effects of maternal milk production on female calf growth and blood biochemistry". *UConn, Office of Undergraduate Research (OUR) Supply Grant.* Fall 2017. **$400. PI (for Randi Guinazzo)**

22. "Effects of Poor Maternal Nutrition on Offspring Brain Development". *UConn, Office of Undergraduate Research (OUR) Supply Grant.* Spring 2018. **$500. PI (for Lauren Engels)**

23. "Effects of Poor Maternal Nutrition on Fetal Brain Development". *UConn, Office of Undergraduate Research (OUR) Supply Grant*. Fall 2018. **$500. PI (for Lauren Engels)**

24. "The Effects of Maternal Nutrient Restriction Followed by Realimentation on Offspring Immunity and Metabolism". *UConn, Office of Undergraduate Research (OUR) Supply Grant*. Spring 2019. **$500. PI (for Veronica Pleasant)**

25. "Effects of Poor Maternal Nutrition on Offspring Lipid Accumulation in Muscle Tissue". *UConn, Office of Undergraduate Research (OUR) Supply Grant*. Spring 2019. **$500. PI (for Hannah Van Bergen)**

26. "Effects of Restricted Maternal Diet Followed by Realimentation on Offspring Mitochondrial Biogenesis in Muscle and Hepatic Tissue of Sheep". *UConn, Office of Undergraduate Research (OUR) Supply Grant*. Spring 2020. **$500. PI (for Gabriella Sulpizi)**

27. "Investigating mRNA Expression of Genes Involved in Epigenetic Modification in the Liver of F1 Offspring of Poorly Fed Mothers Using a Sheep Model". *UConn, Office of Undergraduate Research (OUR) Supply Grant*. Spring 2021. **$500. PI (for Madison Dupre)**

28. "Effect of Maternal Nutrition of Offspring Intramuscular Fat of the Longissimus Dorsi Muscle". *UConn, Office of Undergraduate Research (OUR) Supply Grant*. Spring 2022. **$500. PI (for Shawn Re)**

29. "The Effects of Poor Maternal Nutrition During Gestation on F1 Milk and Colostrum Quality and Immunoglobulin G Concentrations in Sheep". *UConn, Office of Undergraduate Research (OUR) Supply Grant*. Spring 2022. **$500. PI (for Julianna Bosco)**

Club Advisor

Students for One Health, 2022 – present – This club works to educate peers and the community of the intersection of health in humans, animals, plants, and the environment.

STEMTalk Magazine, 2016 – 2022 – This club develops and publish an annual magazine that disseminates information about current research and events related to STEM on the UConn campus. The goal was to meet a need for information that the general population can understand and provides students and others with up-to-date information on innovative work being done at UConn. I have served as a mentor and advisor to the club since its inception and assisted them with obtaining a UConn IDEA grant to develop the first issue. This club was developed by previous members of the WiMSE Learning Community.

UConn Wishmakers on Campus, 2015 – Present – Wishmakers on Campus strives to make the Make a Wish Foundation known across the University of Connecticut student body. This organization's main goal is to help grant children's wishes through a variety of charity events throughout the school year that can include all those who wish to be a part of making someone's dreams come true.

Service and Review

May 2022 — **USDA Conference Grant, *Reviewer*.** Served as an ad-hoc reviewer for a conference grant proposal.

June 2021 — **USDA Grant Panel, *Reviewer*.** Served as a reviewer and panelist for federal grant agency.

Aug 2019 – Present — **Aspen/Snowmass Perinatal Biology Symposium 2022, *Organizing Committee, Chair.*** I was nominated, along with 2 other scientists to organize the scientific program and meeting in 2022. This is an internationally attended meeting of all the experts in fetal programming including animal scientists, physicians, and basic medical scientists. To date we have secured USDA and NIH conference grants, identified and invited all speakers, and abstracts are open.

Aug 2016 – 2022 — **American Society of Animal Science, *Northeast Section Director.*** As a member of the ASAS board, I serve as a representative to the Northeast Section.

- ***Publications Committee Chair (2016 to 2019; 2020 – present) -*** Serve on the executive committee, coordinate 3 journals by working with 3 Editors-in-Chief, the CEO, and other members to ensure timely publication, quality of publications, and promotion of the journals.
- ***Membership committee member -*** Develop and implement programs for the membership.
- ***Finance committee member*** – Oversee the society budget and vote on budget decisions.

- ***Diversity, Equity, and Inclusion committee member*** – Develop programing and policy to ensure the society is inclusive and all have access.

Aug 2013 – July 2016 **Journal of Animal Science, *Section Editor, Growth, Physiology and Endocrinology.*** Responsibilities include review of manuscripts submitted to journal, selection of peer reviewers, review of peer reviews and making a final recommendation, and editing revised manuscripts accepted for publication.

2012 – Present **W2112 Reproductive Performance in Domestic Ruminants (USDA multi-state project), *Member*** 2012 to Present, ***Secretary*** 2013-2014***, Chair*** 2014-2015**.** This is a multistate project through USDA that focuses on improving reproductive performance in domestic livestock. Members meet annually to discuss progress and plan future collaborations. As Secretary, I was responsible for minutes at the 2014 meeting and completing the final annual report. In 2015 I served as Chair, which involved planning and running the meeting.

2008 – 2013 **Journal of Animal Science, *Editorial Board member*.** Responsibilities include peer reviewing of manuscripts submitted for publication in the journal.

2008 – 2016 **Northeast ASAS/ADSA Section, *Chair and Coordinator of the graduate student oral paper competition*.** Responsibilities include, reviewing and accepting abstracts, identifying judges for the competition, organizing the paper session for the national meeting, chairing the session at the national meeting, coordinating the results and presenting results to the recipients.

March 2009 **CT State 4-H Dairy Clinic.** Conducted a workshop titled "Tissue cultures – what they can tell you." at the 4-H clinic.

2008 – Present **Reviewer:** Journal of Animal Science, PLoS One, Molecular and Cellular Endocrinology, Journal of Cellular Physiology, Psychoneuroendocrinology, Endocrine, Scientia Agricola, MAMMBIO, Reproduction, Journal of Dairy Science, Journal of Animal Science and Biotechnology, Animal, Animal Frontiers, Translational Animal Science, Physiological Genomics, Domestic Animal Endocrinology.

Service and Committees

National

2023 – Present ***APLU, Academic Program Section, Secretary, Chair-Elect***

2016- 2022 ***American Society of Animal Science, Board of Directors/Northeast Section Director***

- Serve as contact between Northeast Section of ASAS/ADSA and the ASAS Board of Directors. Plan and run regional meetings, participate in monthly calls, select new board members and award winners.
- Membership Committee, Member
- Publications Committee, Chair (07/2016 to 07/2019), Member (07/2016 to present) – coordinate 3 journals, by working with 3 Editors-in-Chief, the CEO, and other members to ensure timely publication, quality of publications, and promotion of the journals.
- Attend 2 board meetings per year and monthly calls.

University

2023 – Present UConn Student Learning Assessment Committee, *Member*

2019 – 2020 University of Connecticut, Associate Vice Provost for ISS Search Committee, *Chair*

2018 – Present University Senate, *Member (elected for a second term beginning Fall 2022)*

2018 – 2021 University Senate, Enrollment Committee, *Member*

2021 – 2023 University Senate, Justice, Diversity, Equity, and Inclusion Committee, *Member*

2023 – 2025 University Senate, Scholastic Standards Committee, *Member*

2015 – 2022 Institutional Animal Care and Use Committee, UConn, *Member*

College

2022 – Present	College of Agriculture, Health, and Natural Resources, Course and Curriculum Committee, *Ex Officio Member*
2022 – Present	College of Agriculture, Health, and Natural Resources, Commencement Committee, *Chair*
2021, 2024	College of Agriculture, Health, and Natural Resources, UConn, Capacity Grants Faculty Panel, *Member*
2020 – 2022	College of Agriculture, Health, and Natural Resources, UConn, Strategic Vision Implementation Committee, *Member* Lead a sub-group focused on One Health at UConn which has developed and launched a website, developed a podcast series, established a One Health Extension intern, and submitted a grant for external funding.
2018 – 2020	College of Agriculture, Health, and Natural Resources, UConn, PTR Committee, *Member*
2018	College of Agriculture, Health, and Natural Resources, UConn, Dean's Search Committee, *Member*
2017 – 2018	College of Agriculture, Health, and Natural Resources, UConn, Capacity Grants Faculty Panel, *Member*
2015 – 2021	College of Agriculture, Health, and Natural Resources, UConn, Scholarship Selection Committee, *Member*
2014 – 2016	College of Agriculture, Health, and Natural Resources, UConn, Committee to establish an Institute for Food, Health Promotion and Wellness, *Member*
2011 – 2012	College of Agriculture and Natural Resources, UConn, Digital Measure Pilot Group, *Member*
2008 – 2011	College of Agriculture and Natural Resources, UConn, Diversity Committee, *Member*

Department

2021 – 2022	Department of Animal Science, UConn, Search Committee for Department Head, *Member*
2015 – 2018	Department of Animal Science, UConn, PTR and Merit Committee, *Member and Chair*
2015 – 2021	Department of Animal Science, UConn, Scholarship Committee, *Member*
2011 – 2022	Department of Animal Science, UConn, C and C Committee, *Member*
2011	Department of Animal Science, UConn, Search Committee for Technical/Compliance Coordinator, *Chair*
2010 – 2011	Department of Animal Science, UConn, Search Committee for Faculty Position in Equine Science, *Member*
2009	Department of Animal Science, UConn, Search Committee for Lecturer in Equine Science, *Member*